

Flash report

Regional Dialogue to promote the uptake of Eco-design approaches to green the SMEs in Asia



Date: 30 November 2021 | 13.30-16.30 (Thailand Time)

Venue: Online via Zoom

Disclaimer

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List of Acronyms:

AI	Artificial Intelligence
AIT	Asian Institute of Technology
ASEAN	Association of Southeast Asian Nations
COP26	26th United Nations Climate Change Conference of the Parties
DASTA	Designated Area for Sustainable Tourism Administration
DEDE	Department of Alternative Energy Development and Efficiency
EU	European Union
EV	Electric Vehicle
GDP	Gross Domestic Product
PCM	Phase Change Material
RPAC	Regional Policy Advocacy Component
SCP	Sustainable Consumption and Production
SDGs	Sustainable Development Goals
SERD	School of Environment, Resources and Development
SMEs	Small and Medium Enterprises
TBCSD	Thailand Business Council for Sustainable Development
TEI	Thailand Environment Institute

Background:

SMEs in Asia play an important role in driving economy, employment and innovation and therefore are the core engines of transition to green growth. In the Asia-Pacific region, the SMEs account for approximately 97% of all enterprises, two-thirds of employment and around 30 to 60% of the GDP. Reducing the aggregate environmental impact of SMEs through achieving and going beyond environmental compliance in both manufacturing and services is therefore a key success factor in greening the economy. To move towards a green and circular economy, attention should be given to pioneer SMEs who have developed circular business models, contributing to the increased use of renewable energy, improved recycling, and waste management. Green SMEs would therefore, not only be an essential element of the economy but could also drive innovation and competition and thereby help to address economic, environmental, and social challenges in Asia.

Eco-design is a proactive approach in designing products and services that use minimum resources and energy and have minimum negative environmental and social impacts throughout their life cycles while meeting the users' needs of functionality and quality. The practices are considered interventions from conception to development or from use to end-of-life, starting from design materials' extraction, production, distribution, use, and end-of-life. An example includes selection of low-impact resources and processes, extending the lifespan of the material, system design for eco-efficiency, life cycle design, minimizing resource consumption, production lifetime optimization, etc.

In 2020, the EU SWITCH-Asia's Regional Policy Advocacy Component (RPAC) in partnership with the Thailand Environment Institute (TEI) successfully organized a regional dialogue to enhance awareness and knowledge on eco-design as an efficient path to achieve sustainable development. The dialogue highlighted that supporting facilities for the Asian SMEs could be one of the major thrusts in promoting eco-design and Sustainable Consumption and Production (SCP) patterns in Asia. As the region is today, a fast-growing base for the manufacture of various kinds of products for the world, there is a clear need to enhance capacities of the Asian SMEs in dealing with increasingly stringent environmental legislation and certification requirements. The willingness and capability of SMEs to adopt sustainable practices and seize green business opportunities, however are generally faced size-related resource constraints, skill deficit and knowledge limitations. There would be specific challenges for SMEs in making the transition towards green and circular economy approaches and thereby different supporting measures are needed to enhance this uptake.

Objectives of the event:

- To continue the discussion on how to increase the understating of the eco-design approaches for their promotion and uptake by the SMEs in Asia.
- To facilitate exchange of knowledge and good practices in the region that will deep dive on implementation challenges and benefits of adopting/instilling the eco-design thinking for the key sectors in Asia.
- To further gather perspectives on enabling factors/solutions that influence/support SMEs to incorporate eco-design approaches in their businesses.

Logistical information about the event:

The organization of the Regional Dialogue aiming to promote the uptake of Eco-design approaches to green the SMEs in Asia was organized as an online event (via Zoom) and through live broadcasting in social media

Summary of key messages:

Remarks by RPAC

Dr. Mushtaq Ahmed Memon

Project Manager, EU SWITCH-Asia Regional Policy Advocacy Component (RPAC)

Dr. Memon thanked the EU for supporting the transformation to sustainable consumption and production in Asia since 2007 through SWITCH-Asia Programme, and to all partners especially TEI and AIT for co-organizing this event. He highlighted significant role of Eco-design approach for SMEs as driven factor to green development. He also wished that this webinar to be successful by sharing knowledge and experiences from the participants and achieving the objectives of environmentally friendly actions.

Remarks by TEI

Dr. Wijarn Simachaya

President, Thailand Environment Institute

Secretary-General, Thailand Business Council for Sustainable Development

Dr. Simachaya emphasized the important role of SMEs in Asia and the Pacific region. He mentioned that Eco-design is a very important way to reduce the environmental impact from the beginning of production, transportation, usage until disposal of the product for sustainable resources and reducing costs. Dr. Simachaya hopes that the experience sharing and information exchanged today will help SMEs to achieve sustainable business.

Remarks by AIT

Prof. Dieter Trau

Dean, AIT School of Engineering and Technology

Director, AIT Entrepreneurship Center

Prof. Trau referred to net zero emission goal in COP26 and highlighted that SMEs should become an important part contributing to the achievement. He addressed that most industries are adopting strategies aimed at promoting social responsibilities and maintaining sustainable practices. He also stressed that sustainability should be a priority for businesses and Eco-design principles is an important tool to lower environmental impacts.

Opening Remarks

Thibaut Portevin

Head of Cooperation, Delegation of EU to ASEAN

Mr. Portevin presented about the projects on SMEs which received significant technical support and finance to promote the adoption of Eco-design approaches. He discussed about key factors to implementation of Eco-design and mentioned that Eco-design help minimizes environmentally adverse impacts by integrating itself with living processes.

Circular Design-An Intervention from the Ellen MacArthur Foundation

Chuan Fan

Project Manager for Learning and Design, Ellen MacArthur Foundation

Miss Fan presented about the definition and principle of Eco-design, which is prominently the heart of circular economy. She highlighted that the main concept of circular economy is a shift from ownership to access, as the customers often only require access to a product for a short period of time after which they can return it to the service providers or pass it on to a new user.

Panel Sessions:

Session 1: Potential Sectors for Greening SMEs in Asia

Eco-design Approaches in Asia

Dr. Nithiwadee Buawat

Researcher, TEI

Dr. Buawat presented the importance of SMEs in Asia, especially the adoption of Eco-design in their production processes. She outlined the objectives of the webinar and emphasized 8 sectors which will be focused on this webinar. She explained briefly the structure, scope and expectations of the two panel sessions:

Session 1: Potential Sectors for Greening SMEs in Asia with aims to understand how eco-design can be implemented in each industrial sector of SMEs in Asia

Session 2: Enabling Factors to Enhance the Eco-design Approaches with aims to deepen discussions on enabling factors to enhance the application of the Eco-design concept and to explore the way forward to shape up market for green products.

Breakout room 1

Moderator: Assoc. Prof. Naragain Phumchusri

Electronic sector

Dr. Supachai Sampao

Chief, Energy Efficiency Standard and Conservation Group, Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy, Thailand

Eco-design approaches by policy support in Thailand

Dr. Sampao presented Ministry of Energy's policies which promote renewable energy that release less CO2 emission. The policies also promote surplus from agricultural products to reduce carbon and support Eco-design by encouraging energy-saving label certification. He addressed the interrelated in terms of policy and practice for the electronics and energy sectors. In the end of his presentation, he pointed out that financial factors are important to the performance of SMEs.

Construction sector

Mr. Dhanarasu Kaliyaperumal

Associate Counsellor, CII Sohrabji Godrej Green Business Centre, Confederation of Indian Industry

Eco-design in India's Construction Sector

Mr. Dhanarasu presented about the construction industry in India to show that eco-building design can be a real and practical way to reduce carbon footprint even if it has not yet gained widespread. He highlighted that misconceptions regarding the cost of building green, increased complexities, and lack of perceived demand seem to be holding back many affordable housing developers from adopting green designs.

Alternative energy sector

Mr. Samit Jain

Managing Director, Pluss Advanced Technologies

Energy Efficiency in PLUSS

Mr. Jain talked about the solar-powered micro cold room & phase change material (PCM) using reefer truck produced by his organization. The eco-design equipment's operation had proved to reduce refrigeration cost and help save electric vehicle energy. He highlighted that the key success results of applying Eco-design principles to his business are the use of locally available alternative energy coupled with energy-saving innovations that generate income for communities and farmers.

Agriculture sector

Mr. Oudom Thay

National Sales Manager, ATEC Biodigester Cambodia

ATEC by CAMBODIA

Mr. Thay described the uptake of ecological design to the company's cooking technology, the renewable biogas for all cooking based. He said the principle of the biogas system is Eco-design, such as low materials, easy recycling, use of biomaterials, long-term, multipurpose, and recyclability. He also encouraged SMEs to shift toward environmentally friendly actions.

Breakout room 2

Moderator: Prof. Vilas Nitivattananon

Dean of the School of Environment, Resources and Development (SERD), AIT

Service Sector (tourism and logistic)

Prof. Vilas Nitivattananon

Prof. Vilas presented about the "Don't Burn The Heritage", a low-carbon tourism program in a world heritage city of Sukhothai. The program aims to encourage tourists to spend time outdoors in order to reduce indoor energy consumption. He pointed that the primary barrier is the lack of cooperation with multi-stakeholder network and therefore suggest the enhancing communication among different stakeholder groups for effective program implementation.

Textile Sector

Mr. Prince Jimdel Ventura

Founder and CEO, Wear Forward, Philippines

The initiative of *Wear Forward Platform* encourages collaborative consumption through clothing as a service that provides AI-powered circular fashion marketplace and virtual wardrobe while making profit and improving the planet and lives of the people. Mr. Ventura presented the main barriers and difficulties to promote and scale up the initiative circular fashion.

Packaging Sector

Dr. Curie Park

Research Associate Industrial Sustainability, University of Cambridge, United Kingdom

Dr. Park presented the four areas or challenges and opportunities as the following:

- (1) **Consumer insight:** Double edged swords; The top enabler or the second most important barrier for sustainable design depends on the consumer's levels of environmental awareness (Ma, Park and Moultrie, 2020)
- (2) **Authenticity vs Greenwashing** - the threat for product because of lack of transparent information, publicly available standard and life-cycle base.

- (3) Think Big with 3 ideas: Green Design covering a single environment impact issue e.g., recyclability, material replacement, pollution prevention; Eco-design adopting the product lifecycle perspective i.e., circular economy e.g., waste upcycling, design for disassembly; Sustainable Design addressing three pillars of sustainability (i.e., people, planet and profits) beyond only material or packaging e.g., product process or business model that involves local communities
- (4) Makeathon is an effective platform to generate business ideas through open innovation competition with rapid prototyping inviting participants from various disciplines (design, business, engineering, and science) within a short period.

Household/personal Sector

Ms. Patnaree Royruangpanich

Co-Founder, S&P Bioenergy Co., Ltd

S&P Bioenergy Co., Ltd. was established in 2015 with the goal of encouraging social responsibility and sustainability by adopting a 3P Triple Bottom Line as a business model. The purpose is creating sustainable living with the green life-cycle cleaning products through the implementation of Circular Economic approach.

Session 2: Enabling Factor to Enhance the Eco-design Approaches

Breakout room 1 moderator: **Dr. Chaeyod Bunyagidj**

Breakout room 2 moderator: **Prof. Dieter Trau**

The objective of Session 2 was to deepen the discussions on enabling factors to enhance the application of the Eco-design concept and to explore the way forward to shape up market for green products. Some of the ideas, suggestions and information were received from the participants through two breakout rooms as below.

1. Analyze the enabling factors that enhance the application of Eco-design concept in SMEs that consider in the following parameters.

I. Financial Mechanisms

- Higher profit and market share in international level
- Improvement of MSMEs financing mechanisms, such as climate finance, loan accessibility, or low-interest loan with longer payback period
- Financial incentives such as tax exemption and reduction, easier procedure for SMEs to get small-size loan, and Low and stable interest plan.

II. Policy and Regulation

- Incentives for promotion and redressing inherent disadvantage of SMEs, including easier legal registration of businesses for startups.
- Technical support for energy and environmental conservation, and hygiene
- Uphold and improve existing legislation based on science, related to SMEs and environmental sustainability

III. Technology and Innovation

- Investment in new and efficient equipment
- Research topics related to green product, high-cost technology and innovation
- Technological shared facilities

IV. Education and Skills

- Market promotion and support at domestic and international levels
- Integration of green production and eco-design approaches in the academic curriculum of programs related to design, engineering, etc.

V. Gender and Vulnerable group

- Increased representation of and opportunities to female leadership, youth activities, indigenous communities, and fashion supply chain workers in COP and other platforms
- Empowerment of women by improved engagement of women and vulnerable group in business

VI. Others

- Prioritize market readiness
- Set up material flow and take back mechanisms for recyclable

2. From the enabling factors, what is the first five important factors that could support SMEs to successfully applied eco-design in their business.

- Government policies and financial institutions support such as easier legal registration and loan access
- Support on education and training of designing skills
- Open-source technology

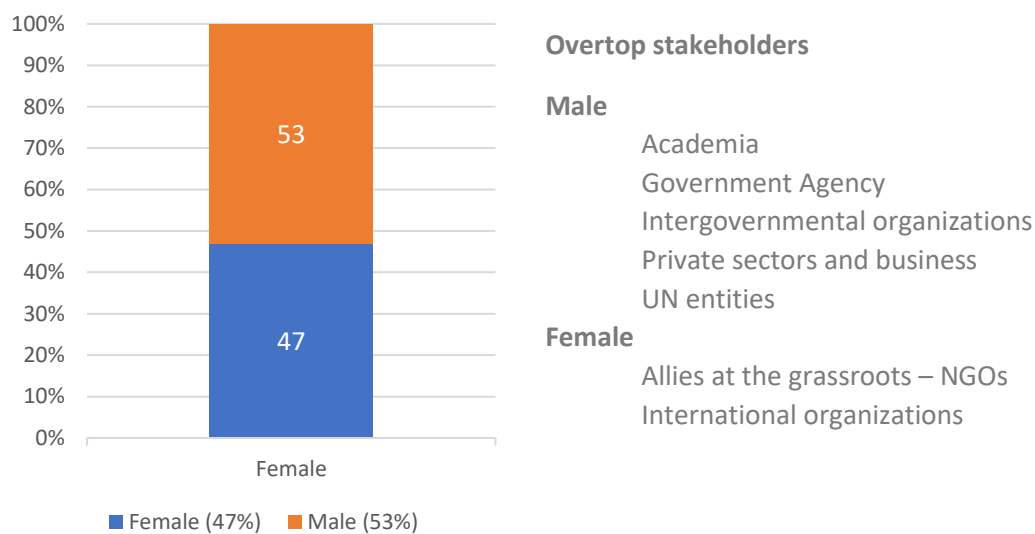
3. From the priority factors, even if SMEs successfully implement Eco-design in their business, but there are some limitations of the market such as having a small international market, low investment, lack of knowledge of international market and standards, and the import good is also a threat to the competition of SMEs entrepreneurs. To motivate SMEs entrepreneurs who implement eco-design in the business, how should we start moving towards shaping the market for green products?

- Standardized food labels
- Support financial at all level
- Encourage SMEs to work hand-in-hand to elevate standards and positions to negotiate with policy makers and consumers
- Focus on target customer and setting up the product price based on customer group i.e., Eco-tourism/low carbon hotel and target amount.

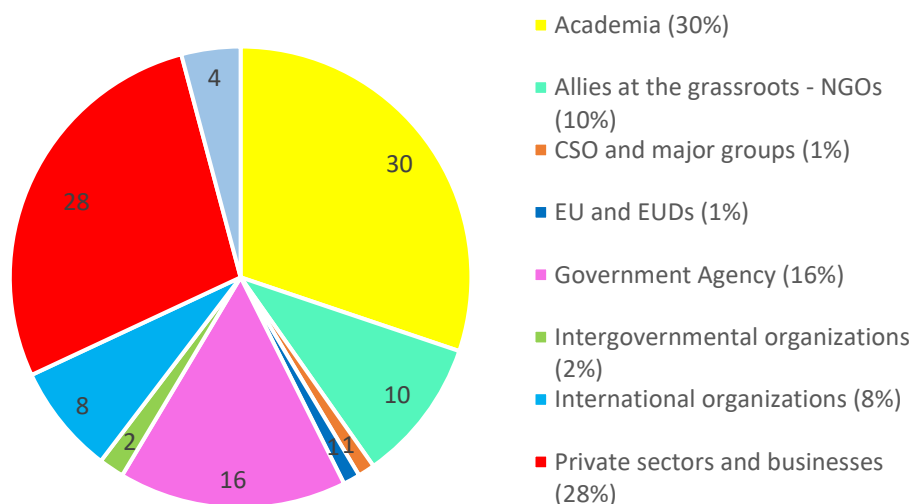
Review on Participants:

More than 160 participants registered prior to the events. The regional dialogue was attended by more than 980 participants belonging to different stakeholder groups on Zoom and Facebook livestreaming. Figures below present the distribution of participants who registered prior to the event by stakeholders. Based on the registrations, 53% of the participants were male and 47% were female. Both of them represented mainly by Private sectors and Academia sector.

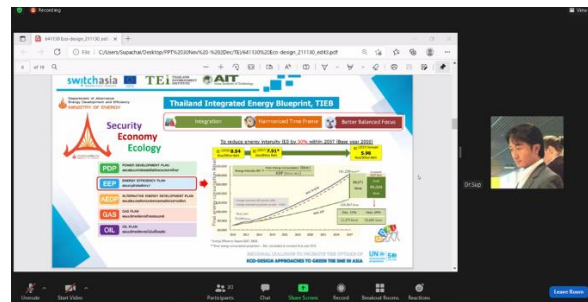
Registration by Gender (%)



Registration by Stakeholders (%)



Snapshots of the event:



Annex:

Annex 1: The Final agenda

Time (ICT)	Theme
1330-1335	Remarks by RPAC Dr. Mushtaq Memon Project Manager, EU SWITCH-Asia RPAC
1335-1340	Remarks by TEI Dr. Wijarn Simachaya President of Thai Environment Institute (TEI) and the Secretary-General of Thailand Business Council for Sustainable Development (TBCSD)
1340-1345	Remarks by AIT Prof. Dieter Trau Dean, AIT School of Engineering and Technology Director, AIT Entrepreneurship Center
1345-1350	Opening Remarks Mr. Thibaut Portevin Head of Cooperation, Delegation of European Union to ASEAN
1350-1400	Circular Design-An Intervention from the Ellen MacArthur Foundation Ms. Chuan Fan Project Manager for Learning and Design Ellen MacArthur Foundation

Session 1: Potential Sectors for Greening SMEs in Asia

1400-1410	Eco-design Approaches in Asia Dr. Nithiwadee Buawat Researcher, TEI
1410-1510	Breakout room 1 Moderator: Assoc. Prof. Naragain Phumchusri <ul style="list-style-type: none"> • Electronics • Construction • Alternative Energy/Development (e-Vehicle) • Agriculture (resource efficient use) Breakout room 2 Moderator: Prof. Vilas Nitivattananon <ul style="list-style-type: none"> • Service (tourism and logistic) • Textile • Packaging • Household/personal use
1510-1520	Plenary Discussion** Ms. Tunnie Srisakulchairak UNEP Programme Management Officer, EU SWITCH-Asia RPAC

Session 2: Enabling Factors to Enhance the Eco-design Approaches

- 1520-1530 The Green Startup Toolkit**
Dr. Lakeesha Ransom
Faculty, AIT School of Management
- 1530-1540 Enabling Factors to Green SMEs**
Pavitra Mohanraj
Technical Expert, FICCI and Founder Infinitive
- 1540-1621 Breakout rooms to deep dive into the identified factors***
- Financial mechanisms
 - Policy and Regulation
 - Technology and Innovation
 - Education & Skills
 - Gender and Vulnerable groups
- Breakout room 1 moderator: **Dr. Chaiyod Bunyagidj**
Breakout room 2 moderator: **Prof. Dieter Trau**
- 1620-1625 Plenary Discussion****
Tunnie Srisakulchairak
UNEP Programme Management Officer, EU SWITCH-Asia RPAC
- 1628-1630 Conclusion and Closing**
Dr. Mushtaq Memon
Project Manager, EU SWITCH-Asia RPAC

*Participants are requested to join their chosen breakout room

**Participants are requested to come back to main room

For more information

SWITCH-Asia event page:

<https://www.switch-asia.eu/event/regional-dialogue-to-promote-the-uptake-of-eco-design-approaches-to-green-smes-in-asia/>

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